



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/996,353	11/27/2001	Sam E. J. Chan	3068	3120

27727 7590 02/09/2004
PEDERSEN & COMPANY, PLLC
P.O. BOX 2666
BOISE, ID 83701

EXAMINER

WARD, JOHN A

ART UNIT	PAPER NUMBER
----------	--------------

2875

DATE MAILED: 02/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/996,353

Applicant(s)

CHAN ET AL.

Examiner

John A. Ward

Art Unit

2875

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 23-38 is/are rejected.
- 7) ☒ Claim(s) 17-22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 10
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 7-11, 15, 16, 23 and 25-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Katrinecz, Jr. et al (US 6,199,996).

Regarding claim 1, Katrinecz ('996) discloses a backlit keyboard for use with a computer or internet television, the keyboard comprising a plurality of keyswitches 5, each having a cap 10 and a stem 11 extending downwardly from the cap, wherein at least a portion of the cap is transparent or translucent wherein said caps are spaced apart to provide gaps between the caps (column 4, lines 52-64).

A substantially planar panel of light-emitting electroluminescent material 100 extending beneath said caps (figure 2) and wherein said panel emits light directly up through said keyswitches by passing through said portion of each cap that is translucent or transparent and wherein said panel emits light up between the caps through said gaps to be visible by a user (column 4, lines 1-19).

Regarding claims 2, Katrinecz shows in figure 2 that the backlit keyboard comprises a base plate 30 received between the plurality of keyswitches, below the

caps 10, and above said panel of light-emitting electroluminescent material 100. At least a portion of the base plate is transparent or translucent so that the light emitted by said panel up through said gaps passes through said transparent or translucent portion of the base plate (column 4, lines 1-8).

Regarding claim 3, Katrinecz shows in figure 4, wherein the backlit keyboard does not include any base plate above the panel of light-emitting electroluminescent material.

Regarding claim 7, Katrinecz discloses that a backlit keyboard, wherein the panel is an electroluminescent membrane 100 which hold electroluminescent material (column 4, lines 29-36).

Regarding claims 8 and 9, Katrinecz teaches that the stems or caps are substantially translucent or transparent (column 4, lines 11-15).

Regarding claim 10, Katrinecz teaches that keyswitches 5 are substantially translucent or transparent (column 4, lines 16-19).

Regarding claim 11, Katrinecz teaches that a control device 85, to vary the intensity of light emitted by the panel.

Regarding claim 15, Katrinecz teaches that the panel emits light up between the caps substantially all the way between the caps (column 4, lines 1-19).

Regarding claim 16, Katrinecz teaches that the caps each have an outer perimeter and the panel emits light up between the caps near the outer perimeter (column 4, lines 1-19).

Regarding claim 23, Katrinecz shows in figure 5 where the electroluminescent material 100 is used to inhibit a user from directly viewing the panel.

Regarding claim 25, Katrinecz figure 2 shows wherein the stems each have an outer side surface, and the panel has one or more perforations and a perforation edge defining each perforation, wherein the panel receives the stems in the perforations and the perforation edge extends near to the stem outer side surface for emitting light through the keyswitches.

Regarding claim 26, Katrinecz shows in figure 2, wherein the keyboard further comprises a circuit board 40 or membrane generally parallel to and below said panel the stems have bottom ends the panel is continuous and is located between the keyswitches and the circuit board or membrane so that, when the keyswitch is depressed, the keyswitch contacts the panel to apply pressure to the circuit board or membrane (column 3, lines 17-29).

Claims 27-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Katrinecz ('996).

Regarding claim 27, Katrinecz discloses A backlit keyboard for use with a computer or internet television, the keyboard comprising a plurality of keyswitches 5, each comprising a cap 10 and a stem 11 extending downwardly from the cap, wherein each cap has a translucent or transparent portion (column 4, lines 1-19).

An outer perimeter light-emitting electroluminescent material 100 positioned below the caps and illuminating said translucent or transparent portions of the caps, and

positioned at least partially between the keyswitches and emitting light up between the caps to illuminate said outer perimeters of the caps a base plate 30 below the caps.

Above the light-emitting electroluminescent material 100 the base plate 30 comprising a transparent or translucent area to transmit light from said electroluminescent material up through the base plate between the caps for said illumination of the outer perimeters (column 4, lines 16-19).

Regarding claim 28, Katrinecz shows in figure 2 that the well plate 30 provides a partial mask on the electroluminescent material 100.

Regarding claim 29, a backlit keyboard comprising a control device 85 to vary intensity of light emitted by said panel.

Claims 33-35 are rejected under 35 U.S.C. 102(e) as being anticipated by Katrinecz ('996).

Regarding claim 33, Katrinecz disclose a backlit keyboard for use with a computer or internet television, the keyboard comprising a plurality of keyswitches 5, each comprising a cap 10 and a stem 11 extending downwardly from the cap. Wherein each cap has a translucent or transparent portion and an outer perimeter light-emitting electroluminescent material positioned below the caps and illuminating said translucent or transparent portions of the caps (column 4, lines 1-19)

The transparent positioned at least partially between the keyswitches and emitting light up between the caps to illuminate said outer perimeters of the caps wherein the keyboard does not include any baseplate above the electroluminescent

Art Unit: 2875

material, so that light emitted up between the caps is visible by a user as shown in figure 4.

Regarding claim 34, Katrinecz shows in figure 2 that the well plate 30 provides a partial mask on the electroluminescent material 100.

Regarding claim 35, Katrinecz discloses a control device 85 to vary the intensity of light emitted by the panel.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katrinecz, Jr. et al as applied to claim 1 above, and further in view of Kasahara et al (US 5,151,696).

Regarding claim 4 and 5 Katrinecz, Jr. et al ('996) disclose all the limitations of the claimed invention as disclosed in the 102 (e) rejection of claim 1 above including a keyboard, keyswitches having caps and stems, and a electroluminescent membrane, but does not discloses a hinge located underneath the caps having a translucent or transparent material.

Regarding claims 4 and 5, Kasahara et al ('696) disclose multi-function keyboard for a remoter control apparatus comprising of a keyboard 5 having a hinge portion 32, made of a transparent material (column 4, lines 47-50).

Regarding claim 5, Katrinecz, Jr. et al in view of Kasahara et al does not teach the use of nylon as the material for the hinge.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use nylon material as a hinge, since it has been held that to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, **125 USPQ 416**.

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the illuminated keyboard of Katrinecz, Jr. et al and the transparent hinge of Kasahara et al in order to provide a illuminated keyboard that have keyswitches that are light weight and durable.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Katrinecz, Jr. et al as applied to claim 1 above, and further in view of Howell (US 5,899,553).

Regarding claim 6, Katrinecz, Jr. et al discloses all the limitations of the claimed invention as disclosed in the 102 (e) rejection of claim 1 above including a keyboard, and an electroluminescent membrane, but does not disclose the electroluminescent material is powered by a computer power source with voltage increased by means of a voltage inverter.

Regarding claim 6, Howell ('553) discloses a electroluminescent lamp for illuminating the a push button, comprising of a keyboard 11, electroluminescent lamp 13, and a power source 20 including a voltage inverter 26.

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the illuminated keyboard of Katrinecz, Jr. et al with the voltage inverter of Howell in order to provide a means of illuminating a keyboard in complete darkness as taught by Howell (abstract).

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Katrinecz, Jr. et al as applied to claim 1 above, and further in view of Fenner (US 5,977,901)

Regarding claim 12, Katrinecz, Jr. et al discloses all the limitations of the claimed invention as disclosed in the 102 (e) rejection of claim 1 above including a keyboard, panel, and an electroluminescent membrane, but does not disclose a control device that automatically turns off the light emitted by the panel after a period of inactivity of the keyboard.

Regarding claim 12, Fenner ('901) discloses a remote control unit with backlit function comprising of a keyboard 20 functioning as a light switch and a control device that automatically turns off the light emitted by the panel after a period of inactivity of the keyboard (column 2, lines 35-43).

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the keyboard of Katrinecz, Jr. et al with

illuminated keyboard of Fenner having the control device in order to provide a keyboard that can be seen in the darkened room as taught by Fenner (column 1, lines 23-25).

Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katrinecz, Jr. et al as applied to claim 1 above, and further in view of Youens (US 5,793,355)

Regarding claims 13 and 14, Katrinecz, Jr. et al discloses all the limitations of the claimed invention as disclosed in the 102 (e) rejection of claim 1 above including a keyboard, panel, and an electroluminescent membrane, but does not disclose touch pad, or a right and left control.

Regarding claims 13 and 14 Youens ('355) discloses a portable computer with interchangeable pointing device comprising of a touch pad 82, and a right and left control 66.

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the keyboard Katrinecz, Jr. et al with the pointing device of Youens in order to provide an illuminated keyboard that can be use with a portable computer.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Katrinecz, Jr. et al as applied to claim 1 above, and further in view of Thornton (US 5,960,942).

Regarding claim 24, Katrinecz, Jr. et al discloses all the limitations of the claimed invention as disclosed in the 102 (e) rejection of claim 1 above including a keyboard, panel, and an electroluminescent membrane, but does not disclose panel is continuous between and underneath the plurality of keyswitches.

Regarding claim 24, Thornton ('942) discloses a thin profile keypad with integrated LEDs comprising of a keypad assembly 20, a flexible sheet 80 continuous between and underneath the plurality of keyswitches 50.

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the keyboard of Katrinecz, Jr. et al with the keypad assembly of Thornton in order to provide a keyboard that prevents dust and foreign object from making contact with the switches.

Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Katrinecz, Jr. et al as applied to claim 27 above, and further in view of Fenner (US 5,977,901)

Regarding claim 30, Katrinecz, Jr. et al discloses all the limitations of the claimed invention as disclosed in the 102 (e) rejection of claim 1 above including a keyboard, panel, and an electroluminescent membrane, but does not disclose a control device that automatically turns off the light emitted by the panel after a period of inactivity of the keyboard.

Regarding claim 30, Fenner ('901) discloses a remote control unit with backlit function comprising of a keyboard 20 functioning as a light switch and a control device

Art Unit: 2875

that automatically turns off the light emitted by the panel after a period of inactivity of the keyboard (column 2, lines 35-43).

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the keyboard of Katrinecz, Jr. et al with illuminated keyboard of Fenner having the control device in order to provide a keyboard that can be seen in the darkened room as taught by Fenner (column 1, lines 23-25).

Claims 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katrinecz, Jr. et al as applied to claim 27 above, and further in view of Youens (US 5,793,355)

Regarding claims 31 and 32, Katrinecz, Jr. et al discloses all the limitations of the claimed invention as disclosed in the 102 (e) rejection of claim 1 above including a keyboard, panel, and an electroluminescent membrane, but does not disclose touch pad, or a right and left control.

Regarding claims 31 and 32 Youens ('355) discloses a portable computer with interchangeable pointing device comprising of a touch pad 82, and a right and left control 66.

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the keyboard Katrinecz, Jr. et al with the pointing device of Youens in order to provide an illuminated keyboard that can be use with a portable computer.

Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Katrinecz, Jr. et al as applied to claim 1 above, and further in view of Fenner (US 5,977,901)

Regarding claim 36, Katrinecz, Jr. et al discloses all the limitations of the claimed invention as disclosed in the 102 (e) rejection of claim 33 above including a keyboard, panel, and an electroluminescent membrane, but does not disclose a control device that automatically turns off the light emitted by the panel after a period of inactivity of the keyboard.

Regarding claim 36, Fenner ('901) discloses a remote control unit with backlit function comprising of a keyboard 20 functioning as a light switch and a control device that automatically turns off the light emitted by the panel after a period of inactivity of the keyboard (column 2, lines 35-43).

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the keyboard of Katrinecz, Jr. et al with illuminated keyboard of Fenner having the control device in order to provide a keyboard that can be seen in the darkened room as taught by Fenner (column 1, lines 23-25).

Claims 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katrinecz, Jr. et al as applied to claim 27 above, and further in view of Youens (US 5,793,355)

Regarding claims 37 and 38, Katrinecz, Jr. et al discloses all the limitations of the claimed invention as disclosed in the 102 (e) rejection of claim 33 above including a keyboard, panel, and an electroluminescent membrane, but does not disclose touch pad, or a right and left control.

Regarding claims 37 and 38 Youens ('355) discloses a portable computer with interchangeable pointing device comprising of a touch pad 82, and a right and left control 66.

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the keyboard Katrinecz, Jr. et al with the pointing device of Youens in order to provide an illuminated keyboard that can be use with a portable computer.

Allowable Subject Matter

Claims 17-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: Nowhere in the prior art is found A backlit keyboard wherein the caps each have an outer perimeter and wherein said panel comprises non-light-emitting areas directly below the gaps so that the panel radiates light from near the outer perimeters up through the gaps at an angle to said panel but so that the panel does not radiate light straight up from below the centers of the gaps.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John A. Ward whose telephone number is 571-272-2386. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on 571-272-2378. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0596.



John A. Ward
Patent Examiner AU 2875

JAW
January 7, 2004